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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
REIS, TRAVIS M	

ART UNIT	PAPER NUMBER
2859	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/729,422	BUSCH, DIETER	
	Examiner	Art Unit	
	Travis M. Reis	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10 and 12* is/are allowed.

6)☒ Claim(s) *1,4-9 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable by Lysen (U.S. Patent 6195615) in view of Nower (U.S. Patent 5980094).

Lysen discloses in Figure 2 a device (1) for measuring and assessing the mutual alignment of bodies (i.e. shafts), with at least one optical gyro (11) enclosed within a housing (10), with means (12, i.e., the contact surfaces 12a-12e) for manually transporting and holding the housing in place on a body whose state of alignment is to be determined, and a display device (14) for reproduction of alphanumeric or graphic information, using which an operator can recognize whether and in what manner correction measures can be carried out on the articles to be measured (Figures 1 & 2).

Lysen does not disclose a high-resolution display device for reproduction of graphic information.

Nower discloses a display device (34) capable of showing alphanumeric and graphical data of alignment over time, and other related data (Figures 2-6). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to replace the display disclosed by Lysen with the high resolution display disclosed by Nower in order to show alignment over time and other related data.

Furthermore, Official notice is taken with respect to the level of resolution since it is very well known in the art, as disclosed by applicant as a well known term of industry

standard art, to use a high resolution display device. Thus, to use a high resolution on the device disclosed by Lysen and Nower would have been obvious to a person having ordinary skill in the art at the time the invention was made since the data displayed would be more accurate due to the finer grid of pixels.

3. Claims 1, 2, 5, 6, 8, & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lysen & Nower as applied to claim 4 above, and further in view of in view of Casby et al. (U.S. Patent 6085428).

With reference to claim 1, Lysen & Nower disclose all of the instant claimed invention as stated above in the rejection of claim 4, but do not disclose the device has means for receiving and processing voice commands of an operator and switching the device into an altered machine status based on the voice commands.

Casby et al. discloses a automobile shaft alignment system which uses a voice command feature (10) to control the service system and can use a voice command feature to switch between modes (col. 5 lines 5-9) (Abstract) (Figure 1). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the voice command means feature taught by Casby et al. to the device disclosed by Lysen & Nower in order to increase the speed of data input by user (i.e. manually typing commands versus simply speaking commands).

With reference to claims 2 & 8, Lysen & Nower disclose all of the instant claimed invention as stated above in the rejection of claim 4, but does not disclose expressly the device has speech output means for acoustically providing determined measurement results.

Casby et al. disclose the system includes a speech output means feature (58) for providing data (col. 4 lines 30-33). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the speech output means feature

taught by Casby et al. to the device disclosed by Lysen & Nower in order that a person could quickly receive data output (i.e. hearing data read out versus reading data on a screen).

With reference to claim 5 & 6, Lysen & Nower disclose all of the instant claimed invention as stated above in the rejection of claim 4, but do not disclose the device is provided with transmission means for wirelessly receiving or exchanging data, commands and other information with an externally arranged control or a higher-level supervisory computer utilizing infrared light and extremely high frequency radio waves as a data carrier.

Casby et al. disclose a transmitting means feature using infrared (16, 22) (col. 3 lines 34-36) and a high-level computer (68) for processing (Figures 1 & 4). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the transmitting and processing means features taught by Casby et al. to the device disclosed by Lysen & Nower in order that the measurement device could send the data to other devices for application.

With reference to claim 11, Lysen, Nower & Casby et al. do not disclose expressly the externally arranged control or higher level supervisory computer has means for acquiring averaging measured values at a selected measurement site for ascertaining the spatial orientation of bodies or the device in a time sequential manner with a measurement frequency at which current mechanical acceleration values with comparatively low intensity are represented or assume a minimum value.

Nower discloses an analysis of alignment data wherein the externally arranged control or higher level supervisory computer has means for acquiring averaging measured values at a selected measurement site for ascertaining the spatial orientation of bodies or the device in a time sequential manner with a measurement frequency at which current mechanical acceleration values with comparatively low intensity are represented or assume a minimum

value (cols. 3 & 4, lines 49 & 4-12). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the means disclosed by Nower to the computer taught by Lysen, Nower & Casby in order for ascertaining the spatial orientation of bodies to know if they are out of alignment.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lysen, Nower, & Casby et al. as applied to claims 1, 2, 5, 6, 8, & 11 above, and further in view of Hall et al. (U.S. Patent 5554975).

Lysen, Nower, & Casby et al. disclose all of the instant claimed invention as stated above in the rejection of claim 2 above, including a handle in that, in a broad sense, the housing contact surfaces (12a-e) act as a handle by allowing a user to pick up and hold the device at said surfaces (Figure 2)

Lysen, Nower, & Casby et al. do not disclose an antenna for transmitting and receiving extremely high radio waves integrated into the handle of the device.

Hall et al. disclose a device which has within its handle an antenna for transmitting and receiving extremely high radio waves in order to alert someone of a problem. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the antenna disclosed by Hall et al. to the handle disclosed by Lysen & Casby et al. in order that a user is alerted that there is a problem with the data collection.

5. Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lysen, Nower, & Casby et al. as applied to claims 1, 2, 5, 6, 8, & 11 above, and further in view of Rodloff et al. (U.S. Patent 5408751).

Lysen, Nower, & Casby et al. disclose all of the instant claimed invention as stated above in the rejection of claims 1, 2, 5, 6, 8, & 11, but do not disclose expressly the value acquisitions being made in a stochastic, nonperiodic manner.

Rodloff discloses a high resolution gyro system for precise angular measurement in which values are recorded in random points in time (col. 9 line 14-5). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to add the means disclosed by Rodloff to the device taught by Lysen, Nower, & Casby et al. in order that the time intervals of the measured value acquisitions are irregularly distributed to prevent value drift error.

Allowable Subject Matter

6. Claims 10 & 12 are allowed.

7. The following is an examiner's statement of reasons for allowance:

With reference to claim 10, the prior art of record does not disclose or clearly suggest a device with computer means for performing an averaging measured value acquisition which excludes the frequency ranges of a technical line, in combination with the remaining limitations in the claims.

With reference to claim 12, the prior art of record does not disclose or clearly suggest a process for measuring and assessing the mutual alignment of bodies comprising the steps of manually holding a measurement probe having an optical gyro enclosed within a housing, inputting a command by an operator to the measurement probe by speech input while the measurement probe is being manually held by the operator, in combination with the remaining limitations in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

8. In response to applicant's argument that Lysen does not involve manually holding the housing on a roller or shaft while measurements are being made, these arguments are not persuasive since, in a broad sense, the housing provide manual means for handling said device by the any of the surfaces of the housing as disclosed in paragraph 2 above, since Lysen does not exclude manually holding the housing in place since no particular means for mounting are disclosed and even if some means were disclosed the device disclosed by Lysen had to be initially manually placed on the body whose state of alignment is going to be determined.

9. In response to applicant's argument that there is no suggestion to combine the references of Lysen and Casby et al. since they are non-analogous art, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Casby reference is only used as an example of the obvious advantageous features of voice recognition in the shaft alignment art which encompasses the alignment of all shafts whether said shafts are non-automotive or automotive, and therefore are the same field of endeavor which Lysen & Casby operate within, as stated in paragraph 3 above.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis M. Reis whose telephone number is (571) 272-2249. The examiner can normally be reached on 8--5 M--F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Travis M Reis
Examiner
Art Unit 2859

Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800

tmr
April 1, 2005

CHRISTOPHER W. FULTON
PRIMARY EXAMINER